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22 June 2007

FSA Consultation on a Draft Saturated Fat and Energy Intake Programme: Final FDF Response

Summary

With thanks to all members who provided comments, I attach below FDF's final response to FSA's consultation on a draft saturated fat and energy intake programme.

FDF's response:

- stresses the importance of an integrated strategy for saturated fat and energy intake, of which, education about healthy eating and lifestyle is an essential part,
- emphasises the importance of offering a wide choice of products to consumers,
- calls for a targeted approach aimed at appropriate consumers,
- suggests that numerical targets for whole product categories are not appropriate,
- highlights the possible untoward effects of orchestrating population-wide changes in the diet,
- calls for incentives to reformulate and offer options with lower levels of certain nutrients.

FDF Response to FSA's Draft Saturated Fat and Energy Intake Programme 22 June 2007

Food and Drink Federation

FDF represents the UK food and drink manufacturing industry, the largest manufacturing sector in the UK.

FDF members are food and drink manufacturing companies, large and small, and trade associations supporting specific food and drink sectors. FDF helps manufacturers operate in an appropriately regulated marketplace and maximize their competitiveness. We communicate our industry's values and concerns to a range of audiences in the UK and abroad, including to Government, regulators, consumers and the media. We work in partnership with other main players in the food chain to help ensure our food is safe and that consumers can have confidence in it.

The Industry We Represent

The UK food and drink manufacturing industry:

- has a turnover of over £66 billion, accounting for 14.8% of the UK's total manufacturing sector
- employs some 500,000 people, around 13% of the UK manufacturing workforce
- exports about £10 billion of food and drink, of which 65% goes to EU countries
- imports about £22 billion of food and drink, of which 68% comes from EU countries
- buys some two-thirds of all the UK's agricultural produce

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Executive Summary

Introduction

FDF would like to congratulate FSA on producing a document that is, overall, thoughtfully considered. It is encouraging to note that some of the issues and challenges we have raised in earlier discussions on reformulation issues have been reflected in this consultation document. Further, the food industry welcomes the opportunity to work collaboratively with FSA on this programme.

FDF members support all four themes suggested by FSA:

- educate consumers
- offer a variety of products, to include lower fat/energy/salt and sugar options
- provide a variety of portion sizes, some of which are smaller portions
- reformulate mainstream products, according to their appropriateness to specific products.

FDF members are already delivering information and products to consumers across all four areas.

In particular, when we last surveyed our members in 2005, we found they had reformulated £11bn worth of products to have lower levels of fat, sugar or salt compared with the year before. A further £11bn worth of products had been launched in lower fat, sugar or salt variants. As the FSA's document acknowledges, that work continues.

An integrated strategy and the importance of education

A strategy for saturated fat and energy intake will be complex and need to take account of a wide range of factors discussed further in this paper. Whilst good progress has been made in a number of areas, tackling all four of the strands set out above, in a strategy focused on the consumer, is essential to enhance the chances of achieving an impact. For example: in the UK, levels of total fat have been brought down to more satisfactory population levels by strategies such as a shift from full cream milk to semi-skimmed (although the choice of milk is still there); reducing the fat in carcass meat; and reducing the fat content of fat spreads. However, on their own these measures appear to have had no impact on obesity levels.

FDF believes strongly that education about healthy eating and lifestyle (which includes physical activity) is an essential part of the strategy. We note that section 2.4, p17 of FSA's consumer research report suggests that consumers agree. FDF remains keen to work with Government and the FSA on a healthy living education programme, building on the many examples of industry good practice.

The importance of offering choice

FDF members have made a commitment to offer a wide choice of products so that those consumers who wish to choose lower calorie/fat/sugar products can readily do so. There are several reasons why we feel choice is important:

- some consumers prefer the taste of the fuller fat/calorie/sugar version
- not all consumers want a more complex technologically developed food with possibly more additives and/or more water

- some consumers, such as the elderly, find it hard to eat enough to meet their energy needs for a number of reasons and so require more energy dense products to be available. It should be noted that being underweight is at least as much of a risk to health as being overweight¹, especially among the elderly.

We find that in many cases, consumers do buy more of the lower fat/calorie/sugar alternatives (such as some fat spreads, many soft drinks and cream cheese), but that is based on their own informed choice.

Targeting a strategy to appropriate consumers

Healthy eating advice and eating a balanced diet is appropriate for all. However, for this particular strategy FDF believes that one size does not fit all and that a more targeted approach aimed at appropriate consumers is essential.

From dietary surveys, the energy intake of the population as a whole appears not to be excessive, and so it would be a better approach to target reducing the energy intake of those who are overweight and obese and those 'at risk' of becoming so², along with encouraging higher levels of physical activity. We acknowledge that the population saturated fat intake is higher than that set by COMA, but again the focus should be on encouraging those with excessive intakes and those with high cholesterol levels to make more appropriate choices from the wide range of choice offered by industry; and to determine if certain foods eaten by those with high cholesterol intakes can be reformulated.

This approach may help to minimise untoward effects that may occur if such a strategy is aimed at the whole population (see below). Aiming a programme at a target audience should more effectively lead to lowering of obesity and heart disease levels. A targeted approach means aiming a variety of strategies, including education and awareness of reformulation of food, specifically at those at risk, i.e. the overweight or obese consumer, or those with high cholesterol levels.

Numerical targets are not appropriate

In line with our view that the strategy should be aimed at appropriate consumers with a multi-pronged approach to tackle the complexity of the issues relating to saturated fat and energy, FDF does not believe that saturated fat and energy reduction should be handled in the same way as salt, where numerical targets have been set which must be achieved by whole product categories.

An additional consideration about reducing the saturated fat and energy in a product is that this is often achieved by increasing the water content of the product. In doing this the likelihood of microbial growth increases - an aspect which it is vital to address and which may give rise to the need for the use of more additives, to which some consumers may object.

Having a choice is important from the point of meeting consumers' health as well as taste needs. For this reason also, FDF would not support the setting of numerical targets for saturated fat or energy levels in food. However a lot of work is being undertaken by FDF members to produce foods with lower calorie, saturated fat, sugar and/or salt levels and FDF members are willing to report on progress to FSA.

Untoward effects of orchestrating population-wide changes in the diet

If FSA wishes to pursue consideration of a population-wide approach, we believe that there are several wider implications which have not yet been considered fully by FSA.

¹ Flegal KM et al. (2005) Excess Deaths Associated with Underweight, Overweight, and Obesity. Journal of the American Medical Association 293:1861-1867.

² Department of Health Healthy living social marketing initiative: a review of the evidence (pdf); http://www.dh.gov.uk/prod_consum_dh/idcplg?IdcService=GET_FILE&dID=135634&Rendition=Web

FDF requests that FSA consults expert bodies, such as SACN, further on some of the issues:

- the consequences of driving down the average population energy intake and shifting the population curve for calorie intake to the left so that more of the population receives insufficient energy intake. Energy intake strategies need to be targeted specifically at those that over consume on energy.
- the consequences of reducing the saturated fat content of food from the point of view of what will replace it. There may be untoward effects on omega 3 to 6 ratios. Also, the use of more polyunsaturated oils may increase the generation of free radicals³: as there is no known population with very high intakes (>12% of energy intake), there is no reliable data on the life-long health and safety consequences of such levels of intake.
- the possibility of using saturated fats which have a neutral effect on blood fats, or use of fats such as Diacylglycerols (DAGS) need to be further explored.

Incentives to reformulate and offer options with lower levels of certain nutrients

FSA needs to ensure, as part of the strategy, that there are incentives for the food industry to reformulate and/or produce alternative foods with lower levels of particular nutrients. This impacts in a number of areas of current FSA activity. For example, the operation of the FSA's nutrient profiling model (developed as a tool for Ofcom to implement television advertising restrictions) means that many reformulated products would still be subject to advertising restrictions. We look forward to discussing this further with FSA as part of the review of the nutrient profiling model now announced. Similarly the FSA principles for signpost labelling schemes mean that reformulated foods with significantly lower levels of key nutrients may carry the same 'traffic light' colour.

Further, the EU health claims regulation means that products that are reformulated to be lower in certain nutrients will not be able to claim that they are lower, if the original product is removed from the market. This is because there would not be a product on the market to compare them with. As a result, consumers will not know that the composition of the product has changed, or readily be able to see that certain foods contain lower levels of those nutrients about which they may be concerned.

³ Department of Health (1991). Dietary Reference Values for Food, Energy and Nutrients for the UK. Report of the Panel on Dietary Reference Values of the Committee on Medical Aspects of Food Policy.

Specific question responses

Q1: We invite views from stakeholders in the catering sector on the contribution that catering businesses could make to the delivery of this Programme and on any of the specific issues in this paper.

A1: N/A

Q2: We propose that we work with health department colleagues (and the new Drinkaware Trust in England) to support their sensible drinking initiatives. We welcome views on this approach.

A2: No specific comment.

Q3: Would energy value labelling on alcoholic drinks be helpful?

A3: We believe this should be explored further with the relevant bodies as part of an integrated approach to raising awareness of energy intake.

Q4: Do you consider that improved education about the need to reduce saturated fat intakes is needed? If so, how should it be done?

A4: Yes. Raising people's awareness and changing behaviour where necessary requires a long-term view and a long-term commitment. It is important that an education programme is targeted appropriately, and that messaging from various stakeholders is complementary. The recent FSA consumer research indicates that consumers also want a long-term commitment to a programme that addresses saturated fat in the diet (point 13, p17 of the research report).

The education process tends to work more effectively when it is started in school⁴, is based on a motivating social marketing approach and avoids negative messaging. It needs to be approached in such a way that pupils engage, for example when combined with some practical approaches, such as cooking.

Adults also need to be aware of the adverse effects of eating too much saturated fat and the principal sources in *their* diet. The FSA consumer research indicates that consumers do not fully understand about saturated fats; they are confused by them and cannot identify main sources (points 7 and 8, p17, and point 22, p18). Educating them on this may help them to become more aware and eventually change their behaviour.

FDF members are already playing their part to help raise consumer awareness and give them appropriate support. For example, Birds Eye are funding dietitian, Sue Baic, to build on an earlier pilot study on the effectiveness of combined physical activity and healthy store tours to deliver healthy eating advice / appropriate product selection at the point of purchase, for patients at risk of CHD⁵. The aim of the project is to assess whether innovative education about a cardio-protective diet (delivered as a group based healthy heart store tour) and a daily exercise routine (walking) are popular and effective interventions for improving diet, physical activity, fitness and metabolic risk factors in patients at risk of CHD recruited from primary care settings.

FDF believes that GDA signpost labelling can help consumers build a more balanced diet. The scheme directly informs consumers of their guideline calorie (energy) and saturated fat upper level for the day and what proportion of this is in a portion of the food they choose to eat.

Q5: Please indicate your views on:

⁴ Ciliska D et al (1999). Hamilton: Ontario Public Health Research Education and Development programme. Effective Public Health Practice Project.

⁵ Title of project: Does innovative group based nutrition education combined with a daily exercise routine significantly improve lifestyle behaviours and metabolic risk factors in patients at risk for Coronary Heart Disease (CHD)?

- **the preferred target audience(s)**
- **the type of messaging, and how it should be delivered,**
- **scope for partnership working between the Agency and stakeholders,**
- **how it might relate to existing information sources (such as labelling, leaflets on healthy eating, websites)?**

A5: For **saturated fats**, the preferred target audience for education should be those with a high cholesterol level.

Positive, motivating messaging tends to have a more beneficial effect on dietary changes^{6 7}. So informing consumers about why they should choose certain foods could be achieved by telling them it tastes great and is actually a 'healthy diet', rather than giving a negative message.

Education should also be about the broader balanced diet, for example it has been shown that encouraging the consumption of foods such as fruit and vegetables and wholegrains can help to reduce the intake of nutrients such as saturated fats. Messages from health professionals, health writers, journalists and people who speak in the media on food and health need to be consistent, reliable, practical and accurate.

With regard to **calorie reductions**, the target audience for education should be restricted to the overweight population and those at risk of becoming obese, as many adults and children are still normal weight and will remain so. Focusing on weight with some vulnerable young girls, could trigger disordered eating.

There is clear scope for a partnership approach to educating consumers in both areas. FDF would be keen to discuss further with FSA how this might be developed using the full range of available tools including on-pack, websites, leaflets, healthcare professional guidance etc.

Q6: We welcome views on the impact of 'healthier' versions of a food category or product on intakes and how uptake can be increased.

A6: This is a complex area with little firm evidence available on the impact of 'healthier' versions of products on overall long-term intake. Industry has taken positive steps to offer a range of lower fat/calorie/sugar options. However, there is no current evidence that consuming more of this type of food will have a significant impact on long term obesity rates⁸. Indeed there are a number of studies to show that in a 'free living' situation, when consumers ate products with reduced fat or sugar levels, this did lead to significant reductions in fat intake and sucrose intake (although not total sugars intake) but had no effect on total energy intake or body weight⁹.

Making reduced calorie or lower fat versions of foods often requires some technical interventions, such as using more sweeteners, preservatives, colloids and/or emulsifiers, particularly if the water or air content has to be increased in order to reduce

⁶ van Assema P, Martens M, Rutler RAC, Brug J. (2001) Framing of nutrition education messages in persuading consumers of the advantages of a healthy diet, *J Hum Nutr Diet*, 14 (6) p435-442.

⁷ Wardle, J and Huon G (2000) An experimental investigation of the influence of health information on children's taste preferences, *Health Education Research*, 15 p39-44.

⁸ Stubbs J, Ferrer S, Horgan G, Energy Density of Foods: Effects on Energy Intake. *Critical Rev Food Science and Nutrition* 2000; 40; pp481-515.

⁹ Gatenby SJ, Aaron JI, Morton GM, Mela DJ (1995) Nutritional Implications of Reduced-fat Food Use by Free-Living Consumers *Appetite*; 25 (3), pp241-252.

⁹ Gatenby SJ, Aaron JI, Jack VA, Mela DJ (1997) Extended use of Foods Modified in Fat and Sugar Content: Nutritional Implications in a Free-Living Female Population *Am J Clin Nutr*; 65 pp 1867-73.

the energy density. However, consumer research, and indeed FSA's own recent research (point 18, p23), show that many consumers like to buy foods that are made with 'conventional' or 'natural' ingredients (or at least ones they recognise) and so introducing more processing or additives may not have the desired effect of moving consumers towards 'reduced' or 'lower' options.

Provision of alternative reformulated products is an important industry contribution to help consumers achieve a healthier diet. To have an impact however, it relies on consumer acceptance of the reformulated products. Even if a product has undergone consumer testing, a reformulated product may not be acceptable to sufficient numbers of consumers to make it a commercially viable product.

In the biscuit, cake and chocolate sector, taste and mouthfeel is paramount and consumers are unwilling to accept unfamiliar versions, or those which do not conform to their expectations for this type of product, especially as they often view them as occasional treats.

It is often easier to develop new products with lower levels of certain nutrients than to reformulate existing products. This is because consumers do not have a preconceived idea of what the food should be like, and so are more accepting of different flavour and texture profiles. Reformulation of existing products may be more difficult in some areas, as reducing certain ingredients can change the flavour and texture and thus impact on overall acceptability.

Alternative products (products that have been developed to be lower in certain nutrients and not reformulated versions of foods) start from a small consumer base. Therefore, in terms of commercial viability, it is very difficult for major retailers to give these products shelf space. Research into who eats these products and why, would be of interest in order to help market them. Targeted marketing and advertising of alternative and reformulated foods will help to raise consumer awareness and may help to promote uptake. A major barrier, as again shown from the FSA consumer research, is the perception that lower energy products will not taste good. This is a challenge to both manufacturers and the Agency.

It is important that industry is incentivised to continue its significant investment activity in the development of alternative and reformulated products. In addition, consumers need to be able easily to identify such products and to be given an incentive to try them. FSA needs to consider these priorities carefully as it reviews the nutrient profiling model developed as a tool for Ofcom, and its view on the most appropriate format for front-of-pack labelling.

Q7: We welcome views on the accessibility of different portion sizes to the consumer and whether this influences quantity of food consumed. Please include any evidence to support your views.

A7: Consumers welcome information on appropriate portion sizes. For a long while, we have as an industry accepted our responsibility for indicating appropriate portion sizes. For many years, companies have provided nutritional labelling indicating the content per serving as well as per 100g, and this has been assisted by the introduction of back-of-pack GDAs, initially highlighting the energy content and amount of fat per serving. Further, linked to FDF's GDA campaign, an increasing number of members now clearly indicate a portion size (as pragmatically as possible) and provide clear information on front of pack about how much energy and how much of the main nutrients of interest are in the pack, and how these compare to the GDA for energy/those nutrients. In this way, consumers can decide if consumption of the pack, or of the portion suggested on the pack of that particular food, is appropriate for them. FDF is now exploring what further information might be helpful to consumers to give them appropriate guidance on portions.

Encouragement to downsize portions is possible but we are not aware of any long-term data to prove it will be effective in reducing overall intake. In some cases, it is important that consumers have a sufficient portion size, especially if that food constitutes a whole meal. Not eating enough at meal times may mean that a consumer will be hungry shortly afterwards and may be tempted to fill-up on inappropriate food. A paper by Rolls and colleagues showed that satisfying portions of lower energy dense foods are better for weight loss than smaller portions¹⁰.

It is also important to remember that appropriate portion sizing is not the only factor influencing consumers' purchasing and consumption. Value for money is also an important driver and this may influence the acceptability of both smaller packaged quantities and changes to the balance of the recipe within individual products.

Q8: We propose that the Agency work with food-industry organisations to encourage reformulation of food products to reduce saturated fat and energy (particularly through reductions in total fat and added sugars), where achievable.

A8: Industry is already reformulating (by this we mean changing the nutrient profile of the standard line and removing the 'original recipe' product from the market) where it is technically feasible and where we feel there will be a consumer benefit and demand for the reformulated product. However, as has been alluded to in the answer to Q6, reformulation of a mainstream product is not always easy or desirable. Thus, industry will continue also to:

- produce new products (as alternatives) which may have low levels of certain nutrients,
- produce 'lower' versions of certain products which can be sold alongside the standard version.

Population energy reduction

As outlined in the introduction, we would be concerned were the FSA to adopt a strategy based on a decrease in the average energy intake of the population. Population statisticians will advise that the whole of the normal distribution curve will then shift to the left. This will mean that the percentage of the population that does not get sufficient calories (and likely micronutrients) will increase and so therefore will malnutrition. Vulnerable groups, such as the elderly or those that have lost weight due to illness, will be at particular risk. FDF therefore feels that an energy reduction strategy should be focused only on those in positive energy balance, and not on the whole population, as it will not be appropriate for all. This is why we see offering a choice of products as being important.

Both SACN and EFSA are looking at current energy intake requirements. It would seem prudent to await the outcome of these deliberations before any targets for population energy intakes are considered by FSA.

Population total fat and sugar reduction

Besides energy, it is hard to determine what impact shifting the population intake curve for sugar, saturated fat and total fat to the left will have on some individuals' health. It could be argued that there will be no adverse effect of shifting the curve to the left for these nutrients (so that those with intakes that are not excessive, or even low, have an even lower intake of these nutrients).

However, we feel that there may be wider implications here too, which need exploring. For example, it is hard to drop both total fat levels and sugar levels and there is

¹⁰ Ello-Martin JA, Ledikwe JH, Rolls BJ (2005) Influence of food portion size and energy density on energy intake: implications for weight management. *American journal of Clinical Nutrition* 82 (supplement): 236S-241S

sometimes a sugar/fat seesaw so that reducing the sugar intake in the diet can lead to an increased intake of fat. Reducing total fat may also lead to a decrease in the intake of essential fatty acids, long chain omega 3 intake, certain poly/mono oils that are beneficial to health^{11 12} and fat soluble vitamins. Further, the population average total fat intake is about right as far as COMA recommendations are concerned.

We do not understand the critique of sugar here. All the expert reviews have concluded that there is inadequate evidence to attribute any risk of disease to sugar consumption^{13 14 15 16}, with the exception of dental decay. Thus, sugar is not a material influence on obesity, cardiovascular diseases, diabetes or cancer. Additionally, the Institute of Medicine report carefully assessed the influence of high sugar consumption on the intake of vitamins and minerals and finds no consistent evidence of any detrimental effect. This conclusion is shared by a very recent systematic review from the University of Ulster¹⁷.

One of the consequences of reducing the proportion of both fat and sugar in a food product is that the protein level has been increased. This could have implications for the phenomenon of rebound adiposity in young children which occurs around the age of 3 and is now thought to be due to the high consumption of protein (from high protein, low fat and sugar dairy products) and its effect on insulin like growth factors¹⁸.

Population saturated fat reduction

FDF also urges some caution on proceeding with a widespread broad-based saturated fat reduction policy in food, before a proper consideration is given to modelling the consequences:

- If saturated fat was replaced with more polyunsaturated oils then the level of polys in the population diet could go up to above 10% (although it is currently only at 6%); COMA recommends that they do not exceed 10% of energy intake due to possible lipid peroxidation^{19 20}. However oils with a high level of PUFA and spreads containing these oils are also high in vitamin E which can protect the PUFA against oxidation.
- The omega 3 to 6 ratio may be affected by the increased use of omega 6 rich oils and this may have health implications, especially inflammatory effects²¹. However the evidence for this is controversial and some experts believe that available

¹¹ Hooper L (2001). Dietetic guidelines: diet in secondary prevention of cardiovascular heart disease. *Journal of Human Nutrition and Dietetics*, 14(4):297-305.

¹² Scientific Advisory Committee on Nutrition/ Committee on Toxicology (2004). Advice on Fish Consumption: benefits and risks.

¹³ World Health Organisation/Food and Agriculture Organisation (2003). Diet, Nutrition and the Prevention of Chronic Diseases. WHO Technical Report Series 916. WHO Geneva.

¹⁴ Food and Agriculture Organisation/ World Health Organisation (1998) Carbohydrates in Human Nutrition: FAO Food and Nutrition paper No. 66. Food and Agriculture Organisation. Rome.

¹⁵ Institute of Medicine, Food and Nutrition Board (2002). Dietary Reference Intakes for Energy, Carbohydrate, Fibre, Fat, Fatty Acids, Cholesterol, Protein and Amino Acids. The National Academies Press. Washington DC.

¹⁶ COMA (1998). Nutritional Aspects of the Development of Cancer. Dept. of Health, Report on Health and Social Subjects 48. The Stationary Office. London.

¹⁷ Kirsten L Rennie, Barbara E Livingstone (2007) "Associations between dietary added sugar intake and micronutrient intake: a systematic review". *British Journal of Nutrition* Vol 97. 832-841.

¹⁸ Rolland-Cachera MF, Deheeger M, Bellisle F (2006) Early adiposity rebound: causes and consequences for obesity in children and adults. *Int J Obesity & Rel Met Dis*. 30: supplement 4:S11-17.

¹⁹ Department of Health (1991). Dietary Reference Values for Food, Energy and Nutrients for the UK. Report of the Panel on Dietary Reference Values of the Committee on Medical Aspects of Food Policy.

²⁰ Finneagan YE et al Plant – and marine- derived polyunsaturated fatty acids have differential effects on fasting and post prandial lipid concentrations and on susceptibility of LDL to oxidative modifications in moderately hyperlipidaemic subjects. *Am J Clin Nutr*; 77:783-95 (2003).

²¹ Simopoulos AP (2004) Omega -6 /Omega 3 EFA ratio and chronic diseases. *Food Rev Int*;20: 77-90

evidence shows that the beneficial effects of omega-6 and omega-3 in humans are independent of each other.²²

FDF recommends that FSA consult SACN to consider possible wider nutritional implications of engineering dietary change and consults COT on possible toxicological implications, such as the generation of more free radical agents and other possible undesirable chemicals.

Q9: We propose that the Programme focuses its reformulation efforts on the food categories outlined in Appendix II but also encourages a broader approach by the food industry. We welcome your views on this approach.

A9: The main barriers to reformulation are whether it is technically feasible in a particular food and whether the reformulated product is acceptable to consumers. These factors should therefore be considered, along with looking at those foods that provide the most calories, fat etc. in the diet. FSA should also look at which foods are eaten most by the overweight and those with high cholesterol levels, as it is these sectors of the population that will benefit from reformulation. It is not appropriate to put a high focus on foods that only contribute up to 2% of saturated fat or calories to the diet.

Q10: Appendix 11 outlines the range of food categories that play a key role in saturated fat and energy intakes in young people and adults and the potential for reformulation within these food categories. We welcome your views on the proposals outlined in Appendix 11.

A10: Providing reformulation choices would be best focused on categories providing the most saturates and energy to the overweight and those with elevated serum cholesterol, especially those categories that are eaten by both those who are overweight and consuming most saturates.

Q11: Are there any food categories for which reformulation should not be considered? Why is this? Please provide evidence to support your views.

A11:

Legal Constraints to Reformulation of Chocolate

Chocolate is heavily regulated in terms of the types and quantities of fat that can be used, under the EU Chocolate Directive (2000/36/EC). These legislative requirements will undoubtedly act as constraints to product reformulation:

- milk chocolate must contain not less than 25% total fat (cocoa butter and milk fat), of which at least 3.5% must be milk fat. Other minimum requirements are not less than 25% dry cocoa solids, not less than 14% dry milk solids, not less than 2.5% dry non-fat cocoa solids.
- in the UK and Ireland, milk chocolate (designated as 'family milk chocolate' elsewhere) must contain not less than 25% total fat (cocoa butter and milk fat), of which not less than 5% must be milk fat. Other minimum requirements are not less than 20% dry cocoa solids, not less than 20% dry milk solids, not less than 2.5% dry non-fat cocoa solids.
- chocolate ('dark' or 'plain') must contain not less than 18% cocoa butter, not less than 35% total dry cocoa solids and not less than 14% dry non-fat cocoa solids.
- white chocolate must contain not less than 25% total fat (cocoa butter and milk fat), of which at least 5% must be milk fat. Other minimum requirements are not less than 20% cocoa butter and not less than 14% dry milk solids.

²² Wijendran V et al (2004) Dietary n-6 and n-3 fatty acid balance and cardiovascular health. *Annu Rev Nutr*; 24 597-615.

In addition to the above, if the chocolate industry replaced sugar with sweeteners in chocolate it would need to bear in mind that the EU Sweeteners Directive (94/35/EC, as amended) states that products must have at least a 30% energy reduction or no added sugar. There is also uncertainty as to the legal position of chocolate in relation to this. A recent opinion from the European Commission stated that chocolate with sweeteners and no added sugars could be called chocolate. However, the Food Standards Agency Guidance Notes state that if the sugar in chocolate was replaced with sweeteners, it would no longer be permitted to be called 'chocolate'.

Technical Constraints to Reformulation of Chocolate

Whilst sugar provides the sweet taste that consumers expect from chocolate, it is the type and amount of fat in chocolate that determines its taste and texture, especially the melting characteristics. The only fats that can deliver all these characteristics are cocoa butter (with or without cocoa butter equivalents) plus milk fat. It would therefore be very difficult to significantly alter the ratio of saturated to unsaturated fats in chocolate. Any fat reduction in chocolate would have to be compensated for by an increase in other ingredients such as sugar, meaning that there would be little or no overall reduction in calories in the finished product.

It should be noted that the type of fat used in chocolate (cocoa butter) which includes 1/3 stearic and one third mono, appears to have a neutral effect on blood cholesterol levels²³.

Legal Constraints to Reformulation of Edible Ices

The composition of 'edible ices' (encompassing ice cream) is regulated in the UK by the Food Labelling Regulations 1996 which set down minimum standards for the type and quantity of fat which products must contain in order to be labelled 'ice cream' or 'dairy ice cream'. Under these Regulations:

- the description 'ice cream' "shall not be applied to any food other than the frozen product containing not less than 5% fat and not less than 2.5% milk protein and which is obtained by subjecting an emulsion of fat, milk solids and sugar to heat treatment and either to subsequent freezing or evaporation, addition of water and subsequent freezing"
- the description 'dairy ice cream' "shall not be applied to any food other than one which fulfils the conditions relating to application of the description "ice cream" to a food (provided that the fat in respect of which a minimum of 5% is specified shall here consist exclusively of milk fat) and which contains no fat other than milk fat or any fat present by reason of the use as an ingredient of such ice cream of any egg, any flavouring, or any emulsifier or stabiliser."

These national legislative requirements evidently act as a constraint to product reformulation or new product development, particularly in respect of low fat 'ice creams'. The constraints posed by national compositional standards for edible ices have been recognised by the European Ice Cream Association, Euroglaces, of which FDF's Ice Cream Committee is a member.

Euroglaces developed a Code for Edible Ices in 1996, which has encouraged harmonisation of national compositional standards across the EU in line with the standards suggested in the Code. Euroglaces revised its Code in 2006 with a view to enabling a wider range of product options to be offered to consumers wishing to make informed choices within the context of a balanced diet and active lifestyle. In doing so, it was reflecting decisions taken by a number of EU Member States when amending their national compositional legislation to remove minimum fat levels completely or to

²³ Ding E L, Hutflless, SM, Ding, X and Girotra (2006) Chocolate and Prevention of cardiovascular Disease: a Systematic Review *Nut & Met* 3:2

reduce them. It also took into account technological improvements which have facilitated the manufacture of equally high quality products with fat levels lower than those previously set out in the Code.

The revised Euroglaces Code consequently does not specify a minimum fat level for 'ice cream' (as opposed to 'dairy ice cream'), whether the 'ice cream' is manufactured with dairy or vegetable fats.

FDF's Ice Cream Committee would be happy to discuss with FSA the scope for bringing the UK Food Labelling Regulations into line with the provisions of the European industry Code in order to facilitate the development of an expanded range of 'ice cream' products with differing nutritional profiles to satisfy evolving consumer demand.

We would further note that edible ices containing chocolate as an ingredient or coating will also have to comply with the compositional standards for chocolate referred to above as they apply to its use as an ingredient.

Legal constraints on Mayonnaise reformulation

The Code of Practice of FIC (Federation of the condiment sauce industries, of mustard and of fruit and vegetables prepared in oil and vinegar of the European Union) states that mayonnaise has to contain a compositional standard of a minimum total fat content of 70%.

Q12: Are there any food categories for which reformulation is not possible for technical, legislative and/or safety reasons? Why? Please provide evidence to support your views.

A12: Please see response to Q11.

Q13: What research do you believe is required to help overcome existing technical barriers to reformulation?

A13: Decreasing the fat content of savoury pastry and other foods which require the use of hard fats such as cakes and biscuits represent particularly challenging areas in terms of reducing the level of saturated fat. Research into the technical challenges that exist in these areas is welcome.

Q14: We welcome your views on the Agency's suggested approaches to reformulation with the food industry.

A14: As indicated in the introduction, FDF believes that all four approaches suggested by the FSA can be utilised, and industry has already made significant progress on these. All four strands need to be linked within the strategy – over-reliance on one element is unlikely to deliver positive results and may have damaging unintended effects. In particular, FDF believes that offering a range of products is important so that consumers can choose the most appropriate product for themselves. One should also not forget that the enjoyment of food is an important psychological element and so some food products fulfil this aspect too.

FDF does not believe that saturated fat and energy reduction be handled in the same way as salt. The approach of shaving salt levels in mainstream products was deemed acceptable because it was felt that even those in the population with a low salt intake would not be harmed if their salt intake was pushed even lower as a result of the population based approach to salt reduction. However, it is not appropriate to apply the same logic to calorie intake and further thought is required to adopt this approach for saturated fat.

Q15: Initially we propose a compilation of commitments. Would this encourage progress? Would a name and praise element be helpful?

A15: FDF members are already using a compilation of methods to help consumers achieve a more balanced diet and believe this is a good way to proceed. Within the 2004 FDF Food and Health Manifesto, members committed to:

- continue to reduce levels of fat, salt and sugar in products and provide lower fat, salt and sugar options where technologically possible, safe and acceptable to consumers
- explore new approaches for portion sizing
- work constructively to ensure the availability of clearer nutrition information (in this respect our GDA campaign is providing at-a-glance information to consumers about the level of particular nutrients in a portion of the food they are consuming, and how that compares to their daily guideline amount)
- participate with others in a Government-led campaign of public education on healthy eating and healthy lifestyles.

FDF Members remain committed to delivering across all the areas of our Food and Health Manifesto. FDF's 'Delivering on Our Commitments' report in September 2005 highlighted the size of industry achievements at that time.

In particular, FDF strongly believes that educating and informing consumers about how to make appropriate choices for themselves is important along with becoming more physically active. However, the decision to choose, say, skimmed milk by one individual (e.g. an overweight diabetic) may not be appropriate for another individual (e.g. an underweight person with a small appetite who's more appropriate choice may be full cream milk). Neither industry nor government bodies should dictate to individuals what foods they should choose. We believe that setting numerical targets for energy and saturated fat level reductions in food are inappropriate. However, with the right information and education, individuals can select appropriately from the wide range of foods available.

We believe that it is important to recognise the many examples of industry progress and would welcome the FSA's continued commitment to doing so.

Q16: Are industry partnerships possible, and if so, what might be done to encourage them.

A16: It would be helpful for FSA to look at collaborating with a food research organisation, such as Campden and Chorleywood Food Research Association and Leatherhead Food International, to run technical conferences or forums for sectors of the food industry. This would promote the exchange of ideas and technical information and could help to initiate research projects to move this area forward. The DEFRA Link programme is another suggested collaboration.

There is a very successful precedent for a partnership between the FSA and industry in the collaboration that occurred with salt. We would be keen to try and forge a similarly constructive partnership in relation to saturated fat and energy – key elements include mutual trust, understanding of the issues and appropriate ways to tackle them and shared priorities for what will be a long-term programme.

Q17: We welcome your views on whether the Agency should work with stakeholders to develop voluntary targets for saturated fat and/or energy (such as through voluntary targets for total sugars) in specific foods.

A17: FDF does not think it is appropriate to set targets for the reasons set out in earlier answers.

So far as the approach to specific foods is concerned, there would for example be no gain to be made in reducing the sugar content of foods which are dry, such as breakfast cereals. This is because the sugar would have to be replaced by another ingredient such as starch (as it could not be replaced by water because it is a dry food). As the calorie content of sugars is the same as carbohydrates (and similar to protein), there would be no calorie saving made by lowering the sugar content of such foods. The sugar could be partly replaced by fibre but this may mean that its taste appeal may be lost to many consumers.

To take an other example, with regard to confectionery it is worth noting that a wide range of sugar free confectionery and chewing gum is already available on the market. However, in this sector there is a limit to how much sugar can be reduced, for technical reasons and because sweetness is an inherent property of the products.

Q18: If so, which specific food categories should such targets apply to and why? And what should the targets apply to: per 100g of product or per portion or as a percentage of energy; should the targets be a range for the food category, a maximum or a minimum; should the targets relate to the product as sold or as consumed? And what levels should such targets be set?

A18: FDF does not think it is appropriate to set targets.

Q19: How should changes in the nutrition profile of individual food categories be monitored?

A19: Monitoring nutrient changes may well be impractical in light of the complexity of the number of products coming on to the market and the multiple composition changes possible.

However, food manufacturers could respond generally to achievements made – manufacturers could for example be asked to update the Agency on the achievements that have been made in the past year. Feedback would be in a more complex format than that currently employed for salt owing to the wide number of variable factors and the technical hurdles inhibiting changes to certain nutrients in some foods.

Ultimately, it is changes in people's overall food intake and health which are important to monitor. Monitoring through surveys such as DEFRA's Family Food Survey and NDNS will provide valuable information.

Q20: Should this information be made publicly available by the Agency?

A20: Yes, FDF should be able to communicate overall work in this area to the Agency and it would be beneficial if the Agency could, in turn, communicate positive moves by the industry to reformulate / develop new products with improved nutrient profiles.

Q21 Do you consider that providing information and advice on the fatty acid profiles of oils and fats intended for food manufacture, and their technical properties, would help food manufacturers to reduce TFA and saturated fat levels?

A21: There is a great wealth of technical expertise on this area within the food industry (for example on inter-esterification) and FDF members are already committed to reducing trans fat levels where technically feasible without having to raise saturated fat levels.

Manufacturers in the biscuit, cake and confectionery sector have extensive programmes in place to reduce / eliminate trans fatty acids from products and significant achievements have been made to date, with work still ongoing in some areas. The oil blends currently used by industry are low in trans fatty acids and generally reduced in saturates. They are balanced to give the functionality required, with a more desirable nutrient profile and produce acceptable products that consumers

want to buy. However, this sector believes that these oil blends are currently at the limit of the balance between technical functionality and consumer acceptability; to reduce saturated fats further would lead to a compromise in lower quality/unacceptable finished product which would be unacceptable to consumers.

However, it is possible that the food industry could work more closely with oils and fats manufacturers and more information and advice would be invaluable to some - currently businesses develop their own links and don't all get the same level of support. Manufacturers are very much in the hands of their fat suppliers in being able to source alternative fats, lower in trans fatty acids and saturates, which will provide the same level of functionality and desired characteristics in the finished product and be commercially viable. Technological developments can take many years to achieve and involve significant costs (direct oil costs and capital investment) and fat suppliers will only move when there is sufficient critical mass and/or other drivers come into play such as issues of sustainability in the supply chain.

Sharing information and building strong partnership should help to spread best / good practice.

It should be noted that some oils are cheaper than others to source and so may be predominantly used. If there are moves towards increasing the use of one or more particular oils, then the overall implications to health as well as to the environment must be considered. One example is the drive in some areas towards reductions in the levels of hydrogenated vegetable oils in foods. It is levels of trans fats that need to be addressed (and not hydrogenated fat levels per se), along with monitoring so that there is no increase in saturated fats.

Proposals relating to individual food categories

Proposal 1: Consider consumer awareness of cooking methods and meat choices to reduce saturated fat levels and ensure best practice in meat product preparation to encourage reductions in saturated fat levels.

Comment 1: Consideration could be given to placing greater emphasis on grilling rather than frying on cooking instructions, including, where appropriate, for meat products such as burgers and grillsteaks, i.e. “for best results, grill...”

To take one example, Birds Eye recommend grilling as the first consumer cook method on their burgers as this leads to fat loss (typically around one third of the fat is lost) prior to consumption.

Birds Eye have investigated using leaner meat to make burgers, but once a certain lowered level of fat is reached, the product falls apart when cooked and is too dry in the mouth. This could be overcome by using other functional ingredients but Birds Eye hold to a store cupboard policy so that they only use ingredients consumers would expect to find in their own kitchen.

Proposal 2: To press for a relaxation of current categories for fat content for drinking milk during negotiations to revise Council Regulation (EC) No.2597/97

Comment 2: FDF supports this proposal as it will widen the choice for consumers. This proposal is about extending choice, so that consumers themselves can choose the most appropriate product for themselves from both a taste and health perspective. However, it would be important to retain the recognised label of skimmed, semi-skimmed and full fat milk that consumers recognise.

Proposal 3: To continue to explore with interested parties the scope and legality for the use of 1% fat milk as an ingredient.

Comment 3: FDF supports this proposal. The availability to industry as an ingredient, of a milk which has a fat level between skimmed and semi-skimmed, offers more scope for industry to offer products with a varied choice of fat levels.

Proposal 4: Work with industry to research further and encourage the production, use and sale of cheddar cheese containing a slightly reduced level of total fat within current legal constraints.

Comment 4: No specific comment.

Proposal 5: Explore the potential to reduce saturated fat levels in ice creams and dairy desserts within legal constraints.

Comment 5: As outlined in our response to Q9, we do not think that it is appropriate for individual food categories, supplying little to the overall consumption of saturated fat and energy, to be targeted within the FSA’s strategy. We would further note in this respect that ice cream, *even when combined with dairy desserts*, is stated in FSA’s consultation paper as making just a 2% contribution to the daily intake of saturated fat for adults. Moreover, ice cream products contain ingredients such as milk and fruit which are a source of nutrients, such as calcium, protein and vitamins, which are important in a healthy, balanced diet.

We would further note that the ‘ice cream’ category encompasses many different types of products, including ice creams, dairy ice creams, milk ices, water ices and other edible ice products. To fulfil current and anticipated consumer needs, ice cream manufacturers already provide an array of different product options - from indulgent ones for special moments to products with a ‘lighter’ nutritional profile which fit easily into a balanced diet. They also provide information on the nutritional content of their products to enable consumers to make an informed choice.

Ice cream manufacturers are keen to continue to offer choice to consumers and it is important to note that fat is an important constituent of ice cream products and the type of fat used is critical to the structure of ice cream. Reductions in fat therefore have to be balanced with their impact on the ice cream product characteristics of creaminess, appearance, taste and texture.

There are also legal requirements in the UK governing the minimum fat levels and types of fat which edible ice products must contain in order to be labelled as 'ice cream' or 'dairy ice cream'. A summary of the constraints posed by these compositional requirements and the consequent revisions which have recently been introduced to the European Industry Code for Edible Ices, are set out under A11. There are similarly legal requirements governing the composition of the chocolate that may be used as an ingredient or coating in ice cream products.

Working within these technical and legal constraints, ice cream manufacturers have nevertheless:

- reformulated products to change their composition and hence nutritional profile (by, for example, increasing the quantity of fruit ingredients);
- developed and introduced new or alternative products with different nutrition profiles to standard products in order to provide increased choice to consumers, taking into account technological advances;
- launched products in smaller sizes to help consumers with portion control;
- worked with ingredients suppliers, particularly vegetable fats suppliers, to seek opportunities to reduce the level of saturated fat in ingredients – and have already made reductions in saturated fat levels by changing the types and profile of the vegetable fats used in products; and
- explored the scope for new technologies which might facilitate further step changes in the level of fat and saturated fat in their products.

Ice cream manufacturers will continue to explore the above against the backdrop of providing choice to consumers – for example Unilever has been working with the FSA on using new technologies requiring Novel Foods approval to use new ingredients to achieve further step changes in fat and saturated fat. FDF's Ice Cream Committee would be happy to discuss with FSA the issues addressed under A11 and here.

Proposal 6: Explore with industry the potential for producing a softer butter containing lower levels of saturated fat through fractionation within current legislative controls, and ways of encouraging customers to opt for lower-fat spreads.

Comment 6: Some consumers choose butter because it is considered to be a 'less processed' or 'more natural' product. Butter that has had to undergo processing to reduce the saturated fat level may be considered less 'natural' and therefore less attractive and there may not be a ready market for such a product.

However, a softer butter offering lower saturates can be produced by using selected fractions of butterfat which are high in butter oleines. Though quite expensive to do so, it is not technically difficult to lower the saturates level of butter to a lower and more acceptable level and at the same time produce something which is altogether more spreadable from the fridge. It is doubtful however, whether the saturates could be reduced down to the level of some spreads while retaining acceptable temperature cycle stability. It is therefore unlikely that you could provide a pure butter based product that is lower in saturates than some vegetable oil based products.

Very often, when butter is used in products, it is done so not only because it is seen by consumers as a better quality ingredient, but also for the functionality that it brings to that particular product. In making it softer, it is likely that it will cease to be

technologically effective in a number of products, thereby necessitating the use of less 'authentic' alternatives.

Regarding spreads, substantial reformulation of yellow fats has already taken place. Over around the last 10 years the saturates level has been reduced in two main ways:

- 1) The fat level of the spreads has been reduced progressively from 80% to 40% and below (for example 18% fat for Flora Extra Light). Saturates intake is therefore lower because of total fat level reduction.
- 2) Development of vegetable oil hardstock has allowed the saturates level of the fat blend to be reduced without loss of textural performance. For example, in Flora the saturates has fallen from 25% to 20% of the fat blend. The saturates level could be further reduced, to say 15%, but at the expense of product firmness, which might raise performance issues with the consumer.

Theoretically, the lowest level of saturates that is achievable in a spread is dictated by the level of saturates in the soft vegetable oils which compose the product. This would mean a lower limit of 8-12% if the product was composed of 100% fat / oil. For example, a liquid margarine such as Culinesse (used in Europe) offers around 7g of saturates per 100g of product (80% of 8g).

Proposal 7: Explore with industry the potential for reformulation and processing changes to reduce saturated fat levels in biscuits, cakes and the toppings and fillings of these and other fine bakerywares.

Comment 7: These products are technically quite difficult to reformulate. Consumer acceptance is also critical here.

Trans fatty acid levels have already been minimised / eliminated in many biscuits and cakes, and great care has been taken not to increase saturated fat levels at same time. In fact, in many cases the saturated fat level has been reduced.

Many Biscuit, Cake, Chocolate and Confectionery Association (BCCCA) members are already exploring the possibility of reformulation of cakes and biscuits with alternative fat blends to reduce saturates still further. However, this is proving technically challenging and, coupled with the likely on-cost of such fat blends and the capital implications at the manufacturing site, such projects will be slow to progress.

We are surprised that in paragraph 150 of its consultation document, FSA is seeking to challenge one of the historic Codes of Practice on buttercream, which was originally a Compositional Standard. This states that the recipe must contain at least 22.5% butter and no other fat. The suggestion by the FSA would appear to be contradictory to the consumer's growing demand for 'better quality' 'more authentic' foods which are not as highly processed and contain less or no additives. We would also highlight that buttercream is not just used as filling for biscuits; it is also widely used as a filling / topping in ambient cakes. We believe this issue has been raised with LACORS, for their view.

There are a number of other legal constraints to the reformulation of biscuit and cake products, which are detailed below:

- the agreement between industry and enforcement interests on shortbread states that it should contain at least 24% fat of which at least 70% should be butterfat
- in fine bakery wares, the use of intense sweeteners is not permitted, under the current EC Sweeteners Directive
- there are legislative usage limits for the preservative, potassium sorbate in fine bakery wares, which cannot be exceeded

In theory, it is possible that the methods of processing used to make pastry / cake products could be reviewed and new technologies explored in order to overcome at least some of the technical issues surrounding the replacement of saturated fat. However, such work is likely to take considerable time to review and assess and be

very costly to achieve. In addition many of the existing cake and pastry-making techniques have been established over hundreds of years and are familiar to and supported by a wide range of consumers in the home as well as in their food purchasing. For most of the fillings and toppings used in biscuits and cakes, the type and level of fat is determined by the technical and functional properties that are required. In order to make significant differences to the saturated fat levels in finished products, much research and development will be required, in collaboration with the fats and oils industry, in order to try to find suitable alternatives which do not detrimentally affect the overall product quality or performance. As well as consumer acceptance, shelf life is of primary importance here.

For pies and pastries, manufacturers are already working with lower levels of fat in pastry recipes compared to traditional domestic recipes (around 20% lower). Many sweet pies / pastries are already made with a choice of topping e.g. full crust, lattice, no lid. It may be possible to extend this choice further, but it would not be acceptable to the consumer, or in the interests of consumer choice to remove the full crust versions completely.

Proposal 8: Encourage consideration of the ingredients and quantity of ingredients used to result in a reduction in saturated fat.

Comment 8: If calorie levels of food are to be reduced, the food will need to be made less energy dense. This can be achieved by replacing fat with carbohydrate or protein or by adding more water to a product (along with more additives). Another way of reducing fat is to reduce the amount of cheese or meat in a product. However, consumers may not accept the product if they perceive that they are getting an inferior or lower quality product as a result of lowering the energy density.

Proposal 9: Explore the potential for reducing levels of added sugars in some high-added-sugars breakfast cereals.

Comment 9: There would be no saving in calories made by reducing the sugar content of foods which are dry, such as breakfast cereals. This is because the sugar would have to be replaced by another ingredient such as starch (as it could not be replaced by water as it is a dry food). As the calorie content of sugars is the same as carbohydrates (and similar to protein), there would be no calorie saving made by lowering the sugar content of such foods. In some cases, the sugar could be partly replaced by fibre but this may mean that the sensory characteristics of the product are changed and its taste appeal may be lost to many consumers.

Removing sugar in breakfast cereals may also mean that it is just added back (in a less measured way) at the breakfast table. Indeed this has been demonstrated by consumer research, which showed that consumers added more sugar themselves if given the option, than when provided with a pre-sweetened cereal.

FDF does not consider that the sugar in breakfast cereal is a public health concern. There is no evidence to support the contrary view, or the proposition that there is a link between sugar in foods such as breakfast cereals and obesity. On the contrary, there is evidence to show that children who consume pre-sweetened breakfast cereals actually have a lower BMI and better macro and micronutrient status²⁴.

In the document, sugar is referred to as added sugars, NMES and free sugars. This is confusing as industry consistently uses one term, and that is total sugars. Only total sugars can be measured analytically and total sugars are the only sugars that are labelled. Further, the body cannot distinguish free sugars from added sugars or NMES so it is misleading to use these terms as if they are independent entities with their own function.

²⁴ Galvin et al (2003) Pub Health Nutr 6, pp351-63, Van den Boum et al (2006) J Am Coll Nutr 25, pp135-43

It is often stated that sugar consumption has increased and that foods nowadays contain more sugar. In fact, average sugar consumption in the UK has decreased substantially in the last thirty years. In schoolchildren, there is evidence to show that in the last twenty years intake from all sources has remained constant, despite appreciable increases in the consumption of soft drinks²⁵. Other sources of sugar in children's food have decreased.

Proposal 10: Encourage a widespread adoption of improved frying and processing practices.

Comment 10: From a nutritional perspective replacement of saturated fats with oils higher in linolenic (C18:3) or Oleic (C18:1) may be preferable to linoleic (C18:2). Rapeseed, soya and cottonseed oil have significant levels of linolenic acid but the higher palmitic (C16) level in cottonseed would rule it out for use as it is also a saturated oil. Nutritionally, rapeseed oil has one of the best combinations of fatty acid profiles but has some stability issues.

There are also issues relating to the sourcing of adequate quantities of oils such as soya oil and cottonseed oil, and possibly corn oil, given the UK consumer's current antipathy to GM products.

There are many manufacturing and cooking processes that seek to minimise levels of total oil in that ends up being eaten by the purchaser, for example grilling or baking a product rather than frying. Many FDF members already highlight healthier ways to prepare product and FDF would be happy to collaborate with FSA to continue to raise awareness and adoption of improved food preparation practices.

Proposal 11: Work with industry to reduce the saturated fat levels of some chocolate and chocolate confectionary products through reformulation within the legal framework.

Comment 11: The clear legal constraints on reformulation of chocolate are covered in Q11.

Vegetable fats are used to produce a lot of chocolate in the UK, to replace cocoa butter. They are either other tropical oils or cocoa butter equivalents, whose fatty acid composition must be similar to that of cocoa butter, to convey the necessary texture and mouthfeel in the finished product. Current legislation on chocolate restricts the particular vegetable fats that can be used in such applications. Hence, it will be virtually impossible to change the composition of UK chocolates, in any respect.

In addition to this, most UK big chocolate brands are and have been well-loved and enjoyed by generations. In making any changes to the balance of fat blends in such products, no matter how small, companies would not only need to have regard for the legal constraints. As it is the type and amount of fat in chocolate that determines its taste and texture, they would also risk a detrimental affect to the consumer acceptability of classic products that have been around for many, many years.

Some BCCCA members have launched 'healthier' option chocolate bars in recent years, many of these with limited success. In understanding the reasons for this, we would refer back to Q6.

Proposal 12: Explore the means by which the contribution soft drinks make to overall energy intakes can be reduced through reformulation.

²⁵ Gregory J and Lowe Sarah et al. (2000) National Diet and National Survey: young people aged 4-18years. Volume 1 Report of the Diet and Nutrition Survey. The Stationary Office, et loc. cit.

Comment 12: For many years the soft drinks industry has innovated consistently to provide low or no-added sugar options. Drinks without any added sugar now make up 61% of the market, compared with only 28% 20 years ago²⁶. Diet versions of cola have now started to outsell their regular counterparts and in categories such as squash the balance of consumption is even further in favour of no-added sugar varieties²⁷. Consumer trends also display a clear growth in key categories such as water and fruit juice, challenging the traditional top spot of cola.

As indicated by a case study within the FSA's paper (*Britvic Soft Drinks – reformulation to reduce sugars in soft drinks*) the industry has also investigated reformulation of existing products. This can present technical barriers and sometimes poor consumer acceptability in terms of taste and texture. Soft drinks manufacturers will continue, however, to review product formulations to ensure that they best match consumer needs.

As the industry is already in alignment with, and in many cases fulfilling the FSA's own objectives, it is suggested that emphasis could be placed in other areas. One area of interest could be a consistent set of messages across soft drinks, and indeed food, to promote active lifestyles through insertions in marketing media.

Proposal 13: Encourage a widespread adoption of improved frying and processing practices for chips and roasted/fried potato products.

Comment 13: Many consumers like the taste and texture of fried potato products that can only be achieved by some kind of frying process. Flavouring systems can deliver taste but not the texture associated with frying in the manufacturing process.

There is a big difference between extruded mash products, such as waffles, and products cut from whole potato, such as chips. There is far greater scope to reduce the fat content in cut from whole products by changing the shape and size of the pieces.

There are many manufacturing and cooking processes that seek to minimise levels of total oil. For example, McCain's recommended reconstitution for many of their potato products is oven baking, which requires no further oil at the point of consumer preparation. If followed, these cooking recommendations will further help to minimise the total oil in the finished product.

See also answer to Proposal 10.

Proposal 14: Work with industry and research organisations to encourage research into methods of manufacturing pastry containing a lower level of saturated fat.

Comment 14: Decreasing the saturated fat content of savoury pastry has been highlighted by some manufacturers as a particularly challenging area and therefore research into this area would be welcomed. It is worth noting, however, that the saturated fat content of pastry sold in supermarkets and used in ready meals, desserts and pies is generally lower than that contained in home made pastry.

For further detail, please see answer to Proposal 7.

²⁶ BSDA data Zenith report 2007

²⁷ Britvic Soft Drinks Report 2007

The UK Food and Drink Manufacturing Industry

The Food and Drink Federation (FDF) represents the food and drink manufacturing industry, the largest manufacturing sector in the UK, employing over 500,000 people. The industry has an annual turnover of £70bn accounting for 15% of the total manufacturing sector. Exports amount to almost £10bn of which 64% goes to EU members. The Industry buys two-thirds of all UK's agricultural produce.

The following Associations are members of the Food and Drink Federation:

ABIM	Association of Bakery Ingredient Manufacturers
ACFM	Association of Cereal Food Manufacturers
BCA	British Coffee Association
BCCCA	Biscuit, Cake, Chocolate and Confectionery Association
BOBMA	British Oats and Barley Millers Association
BSIA	British Starch Industry Association
CIMA	Cereal Ingredient Manufacturers' Association
EMMA	European Malt Product Manufacturers' Association
FA	Food Association
FOB	Federation of Bakers
FPA	Food Processors' Association
GPA	General Products Association
IDFA	Infant and Dietetic Foods Association
MSA	Margarine and Spreads Association
NACM	National Association of Cider Makers
SB	Sugar Bureau
SIBA	Society of Independent Brewers
SMA	Salt Manufacturers' Association
SNACMA	Snack, Nut and Crisp Manufacturers' Association
SPA	Soya Protein Association
SSA	Seasoning and Spice Association
UKAMBY	UK Association of Manufacturers of Bakers' Yeast
UKTC	UK Tea Council

Within FDF there are the following sectoral organisations:

FF	Frozen Food Group
MG	Meat Group
ORG	Organic Food and Drink Manufacturers' Group
SG	Seafood Group
VEG	Vegetarian and Meat Free Industry Group
YOG	Yoghurt and Chilled Dessert Group